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Knowledge and Perception of Lecturers regarding Problem-Based Learning as an Educational Approach in College of Health Sciences, Moi University

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Abstract : *Over the last few decades there has been a paradigm shift from teacher-centered to student-centered learning. The teachers have been more of facilitator ensuring learning objectives are met. Problem Based Learning (PBL) is considered one of the most favorable method in Student-Centered learning. From this point of view Moi University adopted the PBL. This study aims to assess the lecturers' knowledge and perception regarding problem-based learning (PBL). Participants were 65 lecturers in the College of Health Sciences. Self-administered questionnaires were used in data collection. Data analysis done utilizing SPSS 22. The overall response rate was 100 % (N=65), 38% (25) had PBL knowledge at joining program, 34 (52%) viewed program graduates as independent, innovative and creative. While on SPICES model 19 (29%) believe made students lifelong learners and 12 (19%) creates team-work spirit among the students and 75% of the lecturers anticipated to be trained. Also results indicated, lecturers did not prefer mixed method of teaching compared to problem-based learning (PBL) not statistically significant($p<0.05$). A medium proportion of lecturers had good knowledge of PBL a high number with favorable attitudes towards PBL. Training courses by the college should be considered for the staff that had not previously been trained using PBL.*

Keywords *- medical school, perception, problem based learning, Lecturers.*

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I. Introduction

Over the last few decades, a progressive effort has been made to change the method of medical education from traditional, didactic, lecture-based teaching to a more problem-based learning (PBL) approach (Lewis et al., 2009). Problem-based learning is student-centered learning, in which students learn both thinking strategies and domain knowledge. The role of teachers in this type of learning is not just to facilitate the learning process, but also to ensure that learning objectives are met (Hmelo-Silver, 2004). Several studies have considered PBL as the most favorable method to prepare students for working in a team, to deal with problems in the future, and acquire the communication, and patient interaction skills necessary to become active self-directed learners, rather than passive recipients of information (Papinczak, Young, Groves, & Haynes, 2007). Unlike lecture method of teaching, PBL helps students acquire the skills of integrated knowledge delivery and information processing, and promote their active participation (Azer, 2011). In the Kenya and Sub-Saharan Africa, many medical schools are turning to PBL; this is a strategy used in integrated, Community Based Education System, with the goal of enhancing the knowledge and professional skills of students. Implementing such a method in medical education not only requires trained human resources, but also a number of preparatory steps, including much planning and organization. Investigating the experience of lecturers in this method of education is also necessary, and this may encourage administrators to organize PBL training for lecturers who have not previously engaged in such a learning method in order to ensure the successful implementation of PBL. It is necessary to review lecturer's current background in PBL education. From this point of view, this study aimed to assess the knowledge, attitudes and practice of lecturers at Moi University College of Health Sciences regarding PBL.

II. Methods

Participants were drawn from lecturers who use problem-based learning (PBL) strategy to teach in the College of Health Sciences 65 lecturers were recruited into the study. Self-administered questionnaires were used in data collection. This questionnaire utilized a five point forced Likert scale (1-Totaly disagree, 2-Disagree, 3-Not Sure 4-Agree and 5-Totally Agree). The questionnaire also consisted of an open-ended section to comment on the strategy process and contents. Cronbach's alpha, median and inter-quartile range (IQR) was calculated in SPSS 22.P-value less than or equal to 0.05 was taken as statistically significant. Ethical approval was obtained from the Institutional Review and Ethics Committee (IREC) of Moi University and Moi Teaching and Referral Hospital.

III. Results

The overall response rate was 100 % (65 out of 65). The proportion of lectures having good PBL knowledge was 38% (95% CI = 1.5009-1.7391), 25 (38%) joined the program already aware of the way problem-based learning (PBL) model of teaching and learning operates. Lecturers hold the view that graduates of this program are independent, innovative and creative, 34 (52%). While 19 (29%) believe that students trained using SPICES model of teaching and learning method, become lifelong learners and 12 (19%) hold the view that SPICES model of teaching and learning creates team-work among the students. Cross tabulation was done to determine the teaching method preferred by lecturers. Results indicated that lecturers preferred mixed method of teaching compared to problem-based learning (PBL) this result was not statistically significant with a p value at $p<0.05$, the length one has been a lecturer and the preference of problem-based learning (PBL) also had no statistical significance with a p value of 0.138 at $p<0.05$. However, Pearson correlation revealed strong correlation of 0.052.

IV. Discussion

Some of the lecturers said they had been previously trained using PBL. On the other hand, a majority of them wanted to be trained on how PBL of teaching and learning works upon appointment. This is in line with the view that many lecturers need training on new teaching approaches (Hudson, Farmer, Weston, & Bushnell, 2015)

Although majority of the recruited lecturers had not been trained using PBL in their initial academic training, the College of Health Sciences recruited them anyway. The College did this to avoid a situation of insufficient lecturers; which would have delayed the implementation of the program. The particular problem of shortage of lecturers has been reported by the Republic of Pakistan and the Federal Republic of Ethiopia when they started using innovative teaching and learning (Abraham & Azaje, 2013).

This method of recruiting lecturers who had not been trained in PBL model of teaching enabled the College to implement the program. They used in-house training such as seminars and workshops to train the new lecturers in PBL model of teaching and learning. The seminars and workshops were facilitated by the College and their collaborators.

Since lecture method is the most commonly used, majority of lecturers tend to revert back to lecture or mixed method. Even when they have been taken through the seminars; any failure on the lecturers' part, be it of understanding or the lack of teaching materials, they revert back to what they know best (Hudson et al., 2015; Yew & Schmidt, 2012). This explains why it is important to in-service lecturers who do not have prior knowledge or exposure to PBL model. To save on the cost of training, Moi University College of Health Sciences opted to train lecturers together with first years during first year orientation.

Although this method of recruiting lecturers some of whom they have not been trained in PBL model of teaching saved the implementation of the program, it still has effects to date. When lecturers were asked the direction PBL model is heading to; majority said that it is moving to mixed method. Even when a cross tabulation was done to determine the teaching method preferred by both students and lecturers, the results indicated that lecturers preferred mixed method of teaching while students preferred PBL.

When a cross tabulation was done between the length one has been a lecturer and whether PBL model is improving or not; when using Pearson chi-square, there was no statistical significance. But when Pearson's Spearman Correlation was used; it revealed strong correlation. Which shows that lecturers' opinion is valid; not based on chance.

Some lecturers who opt to choose mixed method of teaching may have been caused by various reasons; one among them is that PBL model has not been fully equipped. This makes lecturers improvise ways of teaching and that moves the method from SPICES model to mixed method (Hudson et al., 2015; Wood, 2003) who opined that when lecturers are not given teaching materials and left to improvise, they tend to move the method away from what it to be. They go back to what they know best; their comfort zone lecture method

The WFME Standards expects lecturers to be facilitated to teach in the standard stating "The Medical School must have institutional autonomy to use the allocated resources necessary for implementation of the

curriculum"; it is expected that some of the resources will be used to facilitate the lecturers prepare to teach. This is a failure on the part of the institution; they should facilitate lecturers.

The other problem faced by the lecturers is the kind of induction they get, that some are inducted with the first years during the students' orientation. This kind of orientation does not represent the principles of PBL model, but rather a lecture method to the particular lecturer who is left to listen to the tutor. A lecturer cannot ask questions or participate in the presentation when he/she is learning with students.

This means that seminars and workshops have not succeeded much to move the lecturers to the level of preferring PBL model more than lecture and mixed method of teaching and learning. Among the students the first year orientation they are taken through; has impacted their understanding to the level that majority of the students would opt to choose PBL model instead of lecture or mixed method of teaching and learning.

From their responses in this study, some lecturers demonstrated that they were aware of PBL model and tried to apply it to the program. The lecturers provided explanations about their understanding of PBL model. Most of them generally described it as being student-centered, which agrees with the views of Zhu et al (Zhu, Wang, Cai, & Engels, 2013). In response to the question posed on the benefits of PBL model, the lecturers agreed that graduates who went through the program tended to be more independent, innovative and creative than those who were trained using the lecture method. They described the PBL model graduates as lifelong learners; that this model instilled in them the desire to research for answers when they encounter problems. Lecturers credited this to the teamwork spirit fostered in students by the PBL model. Similar findings on the benefits of this model have been reported by van den Wiel that it creates teamwork spirit (van de Wiel, 1997).

Lecturers have demonstrated their trust in PBL model of teaching and learning by ensuring that it is accredited; and this complies with WFME standards), that "Medical School must be accredited". They have made sure that courses taught in the College of Health Sciences are accredited by Nursing Council of Kenya (NCK), Kenya Medical and Dental Practitioners Board (KMDPB) and East Africa Council Partner States, National Medical and Practitioners Boards and Councils (EACPSNMPBC).

Chi-squire test conducted to ascertain if the duration of service as a lecturer in the College influenced the views that one held about their graduates. From the findings, there was no statistical significance to suggest that duration of lectureship influenced lecturers' views (Damodharan & Rengarajan, 2012).Summarily, the findings from the lecturers indicated that PBL model produced graduates are responsible; able to conduct their own research, seek practical solutions to the problems they encounter in and outside of college (Cools, Evans, & Redmond, 2009).When students engage in self-directed learning, they learn to develop and pursue their own goals (Candy, 1991).Both the students and the lecturers agreed that self-directed learning made students lifelong learners and innovative solution seekers.

Another benefit identified by the lecturers for teaching using PBL model was that it creates teamwork among students. Lecturers and students said that the program fostered teamwork among the students (Prince & Felder, 2006), In addition, by integrating students during teaching, PBL model enables learners to benefit from being taught by various lecturers in other health disciplines.

On the awareness and application of PBL model, it emerged from the research findings that majority of the lecturers understood the concept of innovative teaching and learning method and endeavored to apply in their teaching work. They have ensured that the courses taught are accredited by the respective Councils.

V. Conclusion

The proportion Medium of lectures with good PBL knowledge were earlier awareness of the way problem-based learning (PBL) model of teaching and learning operates. Lecturers at 52% felt PBL makes graduates independent, innovative and creative in learning. Also that students become lifelong learners and creates team-work among the students due to SPICES model. It was not statistically significant that lecturers preferred mixed method of teaching compared to problem-based learning (PBL).

References

[1]. Abraham, Y., & Azaje, A. (2013). The new innovative medical education system in Ethiopia: Background and development. *Ethiopian Journal of health development, 27*(1), 36-40.
[2]. Azer, S. A. (2011). Introducing a problem-based learning program: 12 tips for success. *Medical teacher, 33*(10), 808-813.
[3]. Candy, P. C. (1991). *Self-Direction for Lifelong Learning. A Comprehensive Guide to Theory and Practice*: ERIC.
[4]. Cools, E., Evans, C., & Redmond, J. A. (2009). Using styles for more effective learning in multicultural and e-learning environments. *Multicultural Education & Technology Journal, 3*(1), 5-16.
[5]. Damodharan, V. S., & Rengarajan, V. (2012). nnovative Methods of Teaching. *Journalof MedicalEducation, 1*(2), 6-8.
[6]. Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn? *Educational psychology review, 16*(3), 235-266.
[7]. Hudson, J. N., Farmer, E. A., Weston, K. M., & Bushnell, J. A. (2015). Using a framework to implement large-scale innovation in medical education with the intent of achieving sustainability. *BMC medical education, 15*(1), 2.
[8]. Lewis, A. D., Menezes, D. A., McDermott, H. E., Hibbert, L. J., Brennan, S. L., Ross, E. E., & Jones, L. A. (2009). A comparison of course-related stressors in undergraduate problem-based learning (PBL) versus non-PBL medical programmes. *BMC Med Educ, 9*, 60. doi: 10.1186/1472-6920-9-60

[9]. Papinczak, T., Young, L., Groves, M., & Haynes, M. (2007). An analysis of peer, self, and tutor assessment in problem-based learning tutorials. *Medical teacher*, *29*(5), e122-e132.
[10]. Prince, M. J., & Felder, R. M. (2006). Inductive teaching and learning methods: Definitions, comparisons, and research bases. *Journal of engineering education*, *95*(2), 123-138.
[11]. van de Wiel, M. W. J. (1997). *Knowledge encapsulation: Studies on the development of medical expertise*: Maastricht university.
[12]. Wood, D. F. (2003). ABC of learning and teaching in medicine: Problem based learning. *BMJ: British Medical Journal*, *326*(7384), 328.
[13]. Yew, E. H., & Schmidt, H. G. (2012). What students learn in problem-based learning: A process analysis. *Instructional Science*, *40*(2), 371-395.
[14]. Zhu, C., Wang, D., Cai, Y., & Engels, N. (2013). What core competencies are related to teachers' innovative teaching? *Asia-Pacific Journal of Teacher Education*, *41*(1), 9-27.

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